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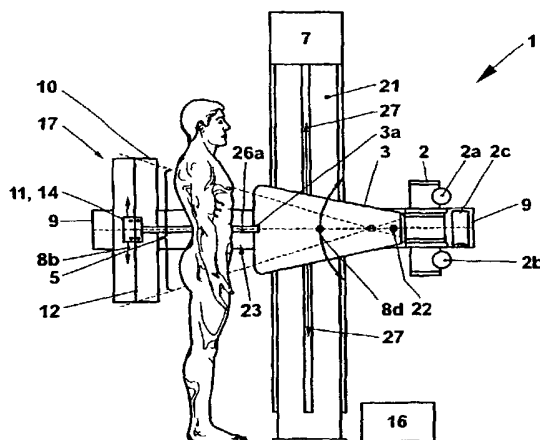
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(57) Abstract: In order to improve an improved X-ray imaging quality an X-ray detector (14) is equipped with means (13, 15) for orienting it towards an X-ray source (2) during a scan (8a, 8b, 27). Means (9, 10, z) for reorienting a housing (10) comprising the X-ray detector (14) and a conventional cassette holder (4) and detector positioning means (9-12) cooperate to receive an X-ray beam (26a) with improved collimation quality. Thus the detection efficiency is increased, the image resolution is enhanced, and the beam exposure of patients (5) can be minimized. Embodiments relate to a linear X-ray detector (14) designed for serial readout of image pixels, a collimator (3, 3a, 3b) for both scanning and wide-aperture X-ray imaging, and a supporting arm (9) carrying the X-ray source (2), collimator (3) and detector arrangement (17).